

XXX.—*Five Months' Birds'-nesting in the Eastern Atlas.* By
OSBERT SALVIN, B.A., Corr. Memb. Zool. Soc. (Part II.)

[Continued from p. 191.]

21. *CAPRIMULGUS EUROPEUS*. (Goatsucker.)

While we were encamped at Kef Laks, an Arab brought to the tents a Goatsucker, half-dead. This was the only occasion on which I met with this bird.

22. *CYPSELUS APUS*. (Swift.)

On the 8th of March, I saw a single bird of this species flying over the city of Tunis. I did not observe it again until reaching Algiers, where it occurred in plenty.

23. *CYPSELUS MELBA*. (Alpine Swift.)

This species is more commonly seen about the plains of the Salt Lake district than in the more mountainous parts of the country, though in the latter it is by no means of unfrequent occurrence. At Kef Laks I was vain enough to attempt to shoot some specimens on a windy day; though they frequently came within shot, their pace was so great, that I totally failed in my object, and only succeeded in firing my gun two or three times. The Alpine Swift breeds in most of the rocks of the country; but we did not procure any of its eggs.

24. *HIRUNDO RUSTICA*. (Swallow.)

I found several pairs of these birds at the caravanseray of Aïn Yacoute, on the road between Constantine and Batna, where they had their nests among the rafters of an open shed.

25. *CHELIDON URBICA*. (Martin.)

In the first week of March I saw several Martins at Sousa, and others subsequently at Tunis.

26. *COTYLE RIPARIA*. (Sand Martin.)

On one or two occasions, I observed birds of this species on the road between Tunis and Kef during the third week in March. I never saw others subsequently.

27. *CORACIAS GARRULA*. (Roller.)

About the wooded hills that skirt the elevated plains of the Eastern Atlas, the Roller may not unfrequently be met with.

In these districts it breeds in the month of May, choosing for the position of its nest a hollow in a tree, and usually preferring one that has a side entrance. In this the eggs are deposited on no softer nest than that which the chips of dead wood at the bottom afford. The Arabs used frequently to catch the birds in their holes and bring them, eggs and all, to us. Their local name is "*Shrugwrug*," derived from one of the cries of the bird, which it well expresses.

28. MEROPS APIASTER. (Bee-Eater.)

The first time I observed this species was towards the end of April, at Kef Laks, where a flock, apparently just arrived, passed over my head. It is plentiful about Djendeli, and breeds, boring the hole for its nest, in banks of the river Chemera and the ditches that drain the low land near the lake. There the soil is alluvial and soft, and the bird finds little difficulty in making its excavation. During our stay, I took several nests, and latterly became an adept at knowing at once which holes were tenanted, and where and when to dig. A little circumspection is necessary at first; for not unfrequently the occupant of the hole is not a Bee-eater, but a toad or snake. The scratchings made by the bird's feet in passing in and out, and the absence of fresh earth beneath the orifice are generally sure indications of the excavation having been completed, and consequently of a strong probability that there are eggs within. The holes pierced by this bird usually consist of a horizontal passage about three or four feet long, the entrance being at various heights from the level ground. This passage, from a circular opening, is gradually enlarged horizontally till it arrives at a chamber of about a foot in diameter, and domed over. In this chamber the eggs are frequently deposited. Should, however, none be found, it is necessary to feel all round the chamber; and in many instances another passage of about a foot long will be found communicating with a second chamber in all respects similar to the first, in which, if it exist, the eggs are placed. The bird makes no nest; but the floor of the chamber is strewn with the legs and wing-cases of *Coleoptera* in such abundance that a handful may be taken up at once. In most instances, I caught one of the old

birds in the chamber containing the eggs; while the hole was being enlarged, it would, every now and then, attempt to escape. The eggs are laid early in June, and are usually six in number. The flight of the Bee-eater is somewhat like that of a Swallow (*Hirundo rustica*), though its movements are much slower; and it is frequently to be seen perched on a bush. Its cry is harsh and monotonous.

29. UPUPA EPOPS. (Hoopoe.)

The Hoopoe was abundant about Djendeli when we were there. In every direction in the wooded hills of this district, the cry from which the bird takes its trivial name might be heard; but, common as it was, we never obtained a single egg.

30. CALAMODYTA LOCUSTELLA. (Grasshopper-Warbler.)

Every night while we were encamped near the Marabout of Sidi Khalifa Cherif, I used to hear the peculiar cry of a member of this genus. On one occasion I saw, at the same place, a bird which I considered at the time to have been a Grasshopper-Warbler. The place appeared ill-adapted for this fen-loving bird, being dry and sterile; but from the fact of its being found in England in fens, woods, and moors indiscriminately, it would seem that the cover afforded by the sedge, rather than the moisture of the situation, is what is sought for by the bird.

31. CALAMODYTA LUSCINOÏDES. (Savi's Warbler.)

I found this bird abundant in the marsh of Zana. On approaching the margin of the reeds, its peculiar rattling note might be heard in every direction. The bird, when uttering this cry, climbs to the very top of a reed, often choosing the tallest, where it sits, if not disturbed, for several minutes, without changing its position. When singing, the head is moved slowly from side to side, by which means it may be that the ventriloquism ascribed to the Grasshopper-Warbler is produced,—the apparent change of position of the bird being, in fact, a change in the direction in which the sound of its voice is thrown. On taking alarm, the songster drops instantly into the thickest sedge, when pursuit is hopeless, as it carefully eludes observation, never showing itself in open flight; sometimes, however,

its course may be traced by the shaking of the reeds as it springs from one to another. The peculiar nest of this species—a beautifully-compact structure composed entirely of dead flag—is artfully concealed in the thickest parts; and at Zana it can only be found by wading in mud and water up to the middle, and even then it is quite a chance to find one. The eggs from this locality are decidedly smaller than English and Dutch specimens.

32. *CALAMODYTA CETTII*. (Cetti's Warbler.)

On one or two occasions, among the tamarisk-trees on the banks of the Chemora, I caught a momentary glimpse of a bird of this species—not more than was sufficient to recognize it. It appears to be shy, and not common in the Eastern Atlas.

33. *CALAMODYTA AQUATICA*. (Aquatic Warbler.)

At the head of the little marsh of Ain Djendeli I more than once observed a pair of this Warbler. We afterwards found it more abundant at Zana, where it was breeding. In its habits it much resembles the common Reed Warbler (*C. arundinacea*); the eggs also are similar.

34. *CALAMOHERPE TURDOIDES*. (Thrush-like Warbler.)

The commonest species of the *Sylvinae* in the marsh of Zana, where its incessant note, day and night, assails one's ears. It breeds abundantly amongst the taller reeds.

35. *PYROPHTHALMA MELANOCEPHALA*. (Sardinian Warbler.)

This is one of the most striking of the smaller species in North Africa. About Tunis and elsewhere in the Regency it is common, and extends along the ridge of the Atlas to Souk Harras, where we lost sight of it on entering the less wooded and more sterile portions of the mountain chain.

36. *SYLVIA CINEREA*. (Whitethroat.)

Observed during the first week in April between the foot of the rock of Djebel Dekma and the river Medjerda.

37. *SYLVIA CONSPICILLATA*. (Spectacled Warbler.)

A true inhabitant of the Salt Lake districts, where it is found abundantly, frequenting the low shrubs that cover the uncultivated portions of that region. It is a shy and wary bird, and

carefully eludes observation by skulking from bush to bush as one approaches. In the above-mentioned shrubs it builds its nest, making a loose but neat structure of dry grass with a scanty lining of horsehair. The eggs in one nest seldom exceed four. The Arabic name is "*M'zizzee*."

38. *SYLVIA ORPHEA*. (Orphean Warbler.)

This is a tolerably common bird about the wooded hill-sides of Djendeli, where it usually breeds, though we sometimes obtained nests from the tamarisk-trees in the plain. Its nest much resembles that of the common Blackcap (*S. atricapilla*), but differs in being more compact and thicker; the position in the branch of the tree selected is usually similar. The note of this bird is pleasing, but hardly so much so as to entitle it to the name of the Orphean Warbler.

39. *HIPPOLAIS POLYGLOTTA*. (Latham's Pettychaps.)

A very common bird about the Chemora, where we found it breeding in the tamarisk-trees.

40. *PHYLLOSCOPUS RUFUS*. (Chiff-chaff.)

This was the first bird I heard on landing at Philippeville before proceeding to Tunis. It appears to winter in Algeria. I obtained specimens near El Djem in March.

41. *PHYLLOSCOPUS TROCHILUS*. (Willow Wren.)

During the month of March I shot more than one of this species in the Regency of Tunis.

42. *PHYLLOSCOPUS SIBILATRIX*. (Wood Wren.)

I shot a single specimen of this bird (the only one I saw) in May, near where the Chemora empties itself into Lake Djendeli.

43. *SAXICOLA ŒNANTHE*. (Wheatear.)

A specimen of this bird was shot near Zana in June.

44. *SAXICOLA LEUCURA*. (Black Wheatear.)

More abundant about the Djendeli district than elsewhere. It appears to be an earlier breeder than other *Saxicolæ*, as young were found at the end of May in an advanced stage.

45. *SAXICOLA AURITA*. (Eared Wheatear.)

The favourite resort of this species is among the stony ground at the foot of the hills ; and in such places it may be looked for, and generally found. Roman ruins also are much frequented. We obtained two nests from the Madracen, where they were placed in the interstices of the stone of that building. Usually the nests were close by, or under a large fragment of rock.

46. *SAXICOLA STAPAZINA*. (Russet Wheatear.)

Is found in similar situations to those of the last, and appears equally distributed over the same districts. No difference is noticeable between the eggs of this and the former species. The Arabic name for all the Wheatears is "*Millil*."

47. *PRATINCOLA RUBICOLA*. (The Stonechat.)

By no means uncommon in the mountainous districts.

48. *SAXICOLA RUBETRA*. (The Whinchat.)

Also common in localities similar to the last.

49. *RUTICILLA MOUSSIERI*. (Moussier's Redstart.)

This species, which is peculiar to North Africa, is perhaps one of the most interesting in the Regency of Tunis and Eastern Algeria, where I had the pleasure of observing it. Its favourite resorts are the ruins of the old Roman cities which lie scattered in all directions throughout this district, and the loose rocky ground which skirts the plains at the foot of the surrounding hills. When visiting such spots, the bright plumage of the male, as he glides from stone to stone, is one of the first objects that attract the attention. The note uttered by the male during the breeding-season is peculiar ; and, unlike that of any of its congeners, it is monotonous, but not unpleasing. This bird seems intermediate between the Stonechats and Redstarts ; but I am inclined to consider that it is more closely allied to the former than to the latter : the character of the plumage of the male would lead one to this supposition ; and its habits, actions, and nest tend rather to confirm the idea. The eggs, which are white with the faintest tinge of greenish-blue, only indicate its connexion with the whole group, including the Wheatears ; and, as in the case of the eggs of *Saxicola oenanthe*, I have no doubt that spotted varieties occur. On observing the eggs of the

Saxicolæ and *Ruticillæ* mentioned in this paper, an intimate relationship can be traced between the whole. In the first instance, take the richly-coloured and highly-marked eggs of *S. leucura*, *S. aurita*, and *S. stapazina*, all of which are greenish-blue, with decided spots of red-brown; next to them I would place those of *S. rubetra*, which are similarly marked, but not so deeply; then those of *S. rubicola*, which also are spotted, but more indistinctly; next follow the pale, delicately coloured eggs of *S. ænanthe*, in which a tendency to spotted varieties is not unfrequently noticeable; then come the eggs of *R. phænicura*, among which spotted varieties occur, but not so commonly as in the preceding. Those of *R. moussieri*, with their just traceable colouring, follow next in succession; and lastly, those of *R. tithys*, which, though white, and differing widely from the well-marked eggs of *S. leucura*, can still be connected with the series through the medium of *S. ænanthe* and *R. moussieri*.

The Arabic name for this bird is "*Zinzuck*."

50. *RUTICILLA PHÆNICURA*. (Redstart.)

I met with this species near El Djem, in the south of the Regency of Tunis, at the end of February.

51. *RUTICILLA TITHYS*. (Black Redstart.)

Not an uncommon bird near Tunis and many of the villages of the Regency; but it would appear to be more rare in the mountainous districts, as I have no note entered of having observed it.

52. *ERYTHACUS RUBECULA*. (Robin Red-breast.)

I shot a Robin near Sousa in the beginning of March. I never saw another during my whole stay.

53. *PHILOMELA LUSCINIA*. (Nightingale.)

I observed Nightingales in a wooded ravine near Khifan M'sakta, in the early part of April. In the Salt Lake districts it does not seem to occur.

54. *AËDON GALACTOTES*. (Rufous Sedge Warbler.)

The head-quarters of this bird seem situated in the Salt Lake districts, where we found it abundantly through the months of May and June. It does not appear that marshy ground is an

indispensable requisite to their haunts ; for I observed it not unfrequently in the arid district of Guerah el Tharf. In the map, this lake looks a magnificent piece of water ; but it is in reality what most of the places similarly laid down are, viz. a wide expanse of sand covered with saline incrustation, which only in peculiarly wet seasons is flooded with water. There nearly always exists in most of these sandy plains a great amount of evaporation, which, with the white saline matter on the surface, at a distance of a few miles gives all the appearance of a turbulent lake. Indeed, so perfect is the deception, that on arriving at Aïn Beïda, we supposed that, when looking on Guerah el Tharf, we had in view a magnificent lake ; and so we continued to believe it, till a morning's ride destroyed the illusion. Subsequently I saw many other instances of mirage, in some of which the hills, clouds, and all the surrounding objects were perfectly reflected. Near Aïn Djendeli, I used frequently to notice the present species about the trees that overhang the dry stony water-courses that run from the hills into the plain beneath. We never found a nest, however, in one of the above-mentioned places ; and it would seem that the bird prefers a moister soil for its breeding-haunts, such as is afforded by the lowlands near lake Djendeli, where the Tamarisk-trees grow on the banks of the Chemora and the small Aïn or spring. The nest we found usually placed conspicuously in the fork or on a branch of one of these trees, and with apparently no attempt at concealment. The heights at which the structure is placed vary from one to six feet from the ground. In one instance I found a nest among the roots of a tree in a bank-side, in a place where one would have expected in England to have found the nest of a Robin. The materials employed are the dead shoots of the Tamarisk, which form the outside,—the inside and lining being usually coot's or duck's feathers, mingled with wool or camel's hair ; and in nine cases out of ten, a small piece of serpent's skin is loosely placed in the bottom of the nest*.

The number of eggs varies from three to five. They are laid about the third week in May.

* I have since observed other instances of serpent's skin similarly used. As to what object the bird has in view in employing such material, I can form no conjecture.

In its habits this bird is shy, and is careful to elude observation. When it alights on a twig, it expands its tail, and shows the peculiar markings which terminate each feather. While holding it thus extended, it raises it once or twice, somewhat after the manner of *Copsychus macrurus*, a bird which must be familiar to all who are acquainted with the New Aviary in the Gardens of the Zoological Society. I may here remark that the eggs of *Aëdon galactodes* are not to be distinguished from those of *Anthus rufescens*, a bird equally or perhaps more common in the same districts in the Atlas: so that eggs ascribed to this species from that country, without undeniable proof that they are what they profess to be, can only be received with great doubt, and are in fact valueless to a collection. Among the Arabs of Djendeli this bird is known as "El Hamara"—"the Red Bird."

55. *PARUS ULTRAMARINUS*. (Ultramarine Titmouse.)

This highly-coloured representative of our common Bluetit (*Parus caeruleus*) is abundant in all the wooded districts. In the mountains it may not unfrequently be observed about the shrubby vegetation which clothes many of the precipices. In its habits, as might be expected, it much resembles our familiar species. I never saw *P. ledouci*, nor have I any note respecting *P. major*, which latter species is said to be common.

56. *BUDYTES FLAVA*. (Grey-headed Yellow Wagtail.)

This Wagtail I observed at Kef Laks, apparently on passage. It afterwards occurred in plenty at Zana and Aïn Djendeli. It appears local in its distribution, but common where it is found.

57. *MOTACILLA ALBA*. (White Wagtail.)

Common about Tunis in February, but not afterwards observed.

58. *ANTHUS PRATENSIS*. (Meadow Pipit.)

I shot one specimen of this bird at Kef Laks in April.

59. *ANTHUS RUFESCENS*. (Tawny Pipit.)

Towards the end of April I first observed this Pipit, when I collected some specimens on the plateau of Kef Laks. We afterwards found it abundant about the plains of Djendeli, from

which district we obtained its eggs. These vary much, some being light-coloured and almost like Wagtails', while others are much darker and more profusely marked. The nest is composed of roots, with a lining of horsehair, and is placed on the lee side of a bush, the prevailing wind being from the north-west.

60. *TURDUS VISCIVORUS*. (Misseltoe Thrush.)

On passing through the Waregra country, near the Tunisian frontier, I shot several of these birds, and saw others.

61. *TURDUS MERULA*. (Blackbird.)

The Blackbird is common in the wooded parts of Tunis. It appears to be a resident in the Eastern Atlas, as we obtained several nests near Souk Harras.

62. *TURDUS MUSICUS*. (Thrush.)

Common all over the plains about Tunis in February.

63. *MONTICOLA SAXATILIS*. (Common Rock-Thrush.)

This Rock-Thrush does not appear to be nearly so common as the Blue Rock-Thrush in the districts we visited; indeed, except on one occasion, at Kef Laks, I have no instance noted of having met with it.

64. *MONTICOLA CYANEA*. (Blue Rock-Thrush.)

In all the mountainous parts and rocky passes, the Blue Rock-Thrush occurs; and in such places one may seldom listen in vain for the plaintive notes of this beautiful songster. We were unsuccessful in obtaining their eggs, though many pairs must have had their nests within easy reach of our different camps while we remained in the mountains.

65. *IXOS OBSCURUS*. (Dusky Bulbul.)

I shot a pair of these birds near Kef Laks. I found them near the bank of a small wooded stream that runs in the valley on the south side of the plateau. My attention was first attracted by the rich song of the male bird; and after waiting a short time, I succeeded in obtaining both it and the female.

66. *MUSCICAPA LUCTUOSA*. (Pied Flycatcher.)

This bird is not uncommon about Souk Harras, but is more rare in the Salt-lake districts.

67. *LANIUS MERIDIONALIS*. (Great Grey Shrike.)

This Shrike seems confined in its range to the northern slope of the Atlas, whilst its place is occupied in Tunis and on the southern watershed by *L. algeriensis*. I found a nest at Foumel Hameer, on the borders of Guerah el Tharf, and endeavoured to obtain the bird, but did not succeed; however, as I was pursuing it, I was enabled to see that it was this, and not the next nearly allied species.

68. *LANIUS ALGERIENSIS*. (Algerian Grey Shrike.)

I frequently met with this bird in Tunis, at Sousa, and other parts of the Regency, but lost sight of it on ascending the Atlas range.

69. *LANIUS RUFUS*. (Woodchat Shrike.)

Is everywhere abundant in Eastern Algeria and Tunis. It breeds in great numbers on the hill-sides in the neighbourhood of Djendeli, making a nest composed almost entirely of one material, viz. a small grey flower, which the bird collects with the stalk, and entwines into its nest, employing the same for the lining. The whole structure is beautifully neat and compact.

70. *GARRULUS CERVICALIS*. (Algerian Jay.)

I saw this bird on several occasions near Souk Harras, but lost sight of it on passing to the less-wooded country.

71. *PICA MAURITANICA*. (Moorish Magpie.)

This Magpie is common in the Eastern Atlas; we found it breeding at Djendeli, where it frequented the wooded hills, and built in the Terebinth trees. The eggs are laid about the third week in May, but some earlier, as young birds were brought to us before the end of that month.

72. *CORVUS CORAX*. (Raven.)

The Raven we found abundant everywhere. It was no uncommon sight to see twenty or thirty birds at one time. They build in every available cliff. All the eggs of *C. corax* from this district are remarkably small in size.

73. *CORVUS MONEDULA*. (Jackdaw.)

Common in many parts, especially about the cave at Djebel Dekma.

74. *PYRRHOCORAX GRACULUS*. (Chough.)

About the hills that surround the plain that holds the marsh of Zana, I not unfrequently used to observe the Chough. While we were staying there, a Frenchman shot one, which proved to be this species, and not *P. alpinus*.

75. *STURNUS UNICOLOR*. (Sardinian Starling.)

I have no note respecting the Common Starling; but as it is said to occur commonly at Tunis during the winter, I, doubtless, omitted to remark it. The present bird I saw at Kef in the Regency of Tunis, subsequently at Djebel Dekma, and lastly at Zana.

76. *COCCOTHTRAUSTES VULGARIS*. (Hawfinch.)

On one occasion, about the middle of May, I saw a pair of Hawfinches among the Tamarisk-trees that grow near the spring of Ain Djendeli.

77. *FRINGILLA SPODIOGENA*. (Algerian Chaffinch.)

This bird is common about Tunis; but we lost sight of it on moving westward.

78. *SERINUS MERIDIONALIS*. (Serine Finch.)

Common about the olive-groves near Sousa and other parts of Tunis, but decidedly rare in the mountainous and more elevated parts.

79. *CARDUELIS ELEGANS*. (Goldfinch.)

Common everywhere. At Djendeli this bird builds a neat nest, composed almost entirely of the flower of the Tamarisk.

80. *CHLORIS AURANTIIVENTRIS**. (North-African Greenfinch.)

Though this bird is represented as common in many parts of the country, I saw but little of it. I shot one near Souk Harras; and afterwards we obtained a few nests near Djendeli. The bird appears to be justly entitled to a specific appellation, as being distinct from the common Greenfinch (*Fringilla chloris*.)

81. *LINARIA CANNABINA*. (Linnet.)

I met with large flocks of this bird near Carthage, in February.

* *Ligurinus aurantiiventris*, Cab. Mus. Hein. p. 158?; *Chlorospiza chloris*, ex Algeria, auct.—(Ed.)

82. *PASSER SALICICOLA*. (Spanish Sparrow.)

Is found in great numbers during the breeding-season among the Tamarisk thickets on the Chemora, and in the high sedge at Zana. The Arabs destroy the nests, eggs, and young, wherever they find them, as their great numbers do much damage to the crops of corn. The nests are placed as thickly as they can stand—the whole colony consisting of perhaps one hundred pairs, occupying only five or six trees. The noise and ceaseless chattering proceeding from one of these “sparrow towns” can easily be imagined; and, guided by the sound alone, one may walk directly to the spot from a considerable distance. One Sunday morning, four Arabs came to our tents, and, gravely sitting down in a row, opened the hoods of their burnouses, and displayed 800 or 1000 sparrows' eggs, which they arranged in four heaps before them, and remained in their sitting posture contemplating them with evident satisfaction. We were rather taken by surprise, but selected the best for our collections, reserving the rest for omelettes.

83. *EMBERIZA CIRLUS*. (Cirl Bunting.)

I frequently saw the Cirl Bunting at Khifan M'sakta and its neighbourhood. We afterwards, in May, obtained nests.

84. *EMBERIZA MILIARIA*. (Common Bunting.)

Everywhere very abundant.

85. *ALAUDA ARVENSIS*. (Skylark.)

The Skylark is very common about Tunis in February; but it occurs rarely in the Salt-lake country, the head-quarters of *A. calandra*, *cristata*, and *brachydactyla*.

86. *GALERIDA CRISTATA*. (Crested Lark.)

Is abundant in all the plains both in Tunis and the Salt-lake country. In the latter districts we found it breeding in the month of May, but some eggs were obtained in April. Though the plains appear to be most frequented, it was by no means of unusual occurrence to find the Crested Lark in the mountains and rocky passes, in this respect differing from *A. calandra* and *brachydactyla*, both of which we found exclusively in the level country.

87. *CALANDRELLA BRACHYDACTYLA*. (Short-toed Lark.)

This lark is much more local in its distribution than the last—its range being confined to a few favoured spots in the elevated plains. About Aïn Beïda it is abundant, and throughout the great plain of El Tharf it may be commonly met with; in the neighbourhood of Djendeli it also occurs. Like the rest of its congeners, it places its nest on the sheltered side of a bush,—the scrubby vegetation which clothes the whole of that arid district affording the necessary protection for its offspring. The eggs of this species vary very much; even in the same nest hardly two similar ones are to be found. So different were some of the varieties, that the greatest care was necessary in identifying their true parentage.

88. *MELANOCORYPHA CALANDRA*. (Calandra Lark.)

The large size of the Calandra makes it conspicuous among its congeners in places where the other species are found. It seeks the pastures and corn-fields more than the above-mentioned species, though in some places all three are found together in equal abundance. The number of eggs varies from three to five; they are laid about the second week in May, but some earlier.

89. *LOXIA CURVIROSTRA*. (Crossbill.)

On the 26th of March, we met with the Crossbill half a day's journey westward of Kef, on a ridge of the mountains covered with pine-trees. There were five or six of them, consisting of two parent birds with their young just out of the nest.

90. *PICUS NUMIDICUS*. (Numidian Woodpecker.)

I shot one of these birds in a tree that overhangs a small marabout that stands on the north side of the eastern precipice of Djebel Dekma.

91. *GECINUS LEVAILLANTII*. (Levaillant's Woodpecker.)

This close ally, but well-defined representative of our common Green Woodpecker (*Gecinus viridis*) is not uncommon in districts where there are large trees. I met with it on several occasions; and a nest of seven eggs, with the old bird, was brought to us by an Arab. These eggs appear, on comparison, decidedly smaller than those of our familiar species.

92. *CUCULUS CANORUS*. (Cuckoo.)

In the Waregra country, near Sidi Youssef, towards the end of March I saw several Cuckoos, one of which I shot. I have no recollection of having either met with it or seen it subsequently.

93. *OXYLOPHUS GLANDARIUS*. (Great Spotted Cuckoo.)

Mr. Hewitson, quoting Mr. Tristram, has given an account of the breeding of this bird (*vide* 'Ibis,' vol. i. p. 76), to which a few additional remarks of my own may not be here out of place. I was unfortunately the one of the party that saw least of this bird; therefore I can only add a little information as to the manner in which our eggs were obtained, and, I am sorry to say, nothing to the general habits of the bird. I first observed it in the Waregra country, near the Tunisian frontier, after which we lost sight of it till the middle of May, when our attention was drawn to the fact of its existence in the neighbourhood in which we were then located, by the information brought by Mr. Tristram from Batna. On the morning of the 20th of May, an Arab brought us two eggs which corresponded so well with the egg Mr. Tristram had previously obtained, that our expectations were raised to the highest pitch. A few hours after, another egg was brought from another quarter; and in the evening of the same day, four more. With none of these eggs were any of the *Pica mauritanica*. On blowing them, the first two proved to be about half-incubated, and the zygodactylic structure of foot was clearly visible; the others were fresh. I may add, that on taking each of the Arabs to my box of skins, each separately selected a Common Cuckoo, and showed wherein the Great Spotted Cuckoo differed. There was no skin of *O. glandarius* in the box. On the 20th of May, therefore, we had no doubt that we had the eggs of this Cuckoo. On May 25th, Mr. Simpson was taken, by an Arab who had been in the habit of collecting for us, and who lived in a camp not far from ours, to a nest, in which he found three eggs corresponding exactly to those we had previously obtained. Mr. Simpson did not see the birds near, and at the time supposed, from the fact of the nest being so close to the Arab tents, that the eggs had been put there by the man who showed it to him,

in order that he might more easily watch that no other Arab took the eggs and deprived him of the reward we had offered. Mr. Simpson, on reconsidering the facts of the case, is now of opinion that the eggs had been deposited by the bird herself. The nest in which these eggs were placed was described as an old one, and as probably one of a Magpie (*Pica mauritanica*). The next nest obtained was on May 30th, and was that taken by Mr. Tristram, as related in the paper referred to above. Two other eggs were brought to us on another occasion. Returning again to the different nests above mentioned, it would appear that on no occasion did we find other eggs with those of the Cuckoo, and that certainly on two occasions more than one egg was found in the nest, viz. in the nest taken by Mr. Simpson, and in that taken by Mr. Tristram. Again, there is a probability, from the fact of the two eggs first brought being equally incubated, that they were from the same nest; and it is also presumable that the four eggs brought on the same day were from the same nest, as two of them showed marks of imperfect formation in the shell, one more than the other, indicating the order in which they had been laid. The circumstance of Mr. Tristram finding two of the eggs of this bird marked as *Pica mauritanica*, and two others, really Magpies, similarly marked, after all proves nothing. They were not taken by any of us, else they would have been so noted, but were brought to our tents by some Arab; and it is as likely that he took them from two, three, or four nests, as from one. Further evidence than an Arab's bare statement we usually deemed necessary to determine whether the eggs brought to us were from one or more nests. I believe it is contrary to our experience of parasitic Cuckoos to find nests occupied by eggs, certainly of a Cuckoo, more than one in number, and they the only eggs in the nest*. I am not disposed to throw any doubt upon M. Brehm's statements respecting the habits of this bird. I have not his paper, and I am sorry to say it is now inaccessible to me; but, if I recollect rightly, he follows the bird through the whole of the breeding-season, and had on many

* In writing to me respecting an egg of the *Chrysococcyx lucidus* of Australia, Mr. W. Bridger says that it was incubated while the eggs of *Acanthiza chrysorrhoa*, in the nest of which he found it, were fresh, showing that the egg of a parasitic Cuckoo may be the first deposited in a nest.

occasions seen the young Cuckoo with the young of its foster-parents in the same nest. We only obtained the eggs in the manner I have stated, and unfortunately left their haunts before the young were hatched; our work therefore was left imperfect, and it remains the enviable task of some enterprising naturalist to unfold the mystery that still hangs over the breeding-habits of this bird. For his guidance, whoever he may be, let me add that the wooded hills on the south side of Lake Djendeli, and in the neighbourhood of the Madracen, both which districts lie a little to the eastward of the high-road between Constantine and Batna, may be considered as favoured breeding localities of *Oxylophus glandarius*. I have refrained from suggesting any probable hypothesis which might clear up the difficulty, as I feel sure that before long we shall arrive at the facts of the case, and any false supposition might tend to error.

94. COLUMBA PALUMBUS. (Ring Dove.)

This Pigeon, which Mr. Gould assures me differs in no way from our common Ring Dove, is abundant in many parts, and breeds in the month of May.

95. COLUMBA LIVIA. (Rock Dove.)

Occurs in great numbers in the Cave of Djebel Dekma, and in other suitable rocks of that district.

96. TURTUR AURITUS. (Turtle Dove.)

Common about Djendeli, where it breeds.

97. TURTUR ÆGYPTIACUS. (Egyptian Turtle Dove.)

In the Regency of Tunis I observed this bird in many places. It is found usually about the towns, and frequents the ruined Amphitheatre of El Djem. I never saw it in Eastern Algeria.

[To be continued.]

XXXI.—*Recent Ornithological Publications.*

1. ENGLISH PUBLICATIONS.

THE fourth and concluding part of the 'Illustrated Proceedings of the Zoological Society' for 1858, which was published last month, contains numerous papers on Ornithology, and the plates attached are of the usual excellence;—how can Mr. Wolf's